

IN THE CLAIMS

Please cancel claims 12 – 20, 22, 23 – 27, 30 – 33, 42 – 45 and 48 and further amend the claims as indicated below.

1. (currently amended) A liquid crystal device comprising:
a first cell wall and a second cell wall enclosing a layer of liquid crystal material;
electrodes for applying an electric field across at least some of said liquid crystal material; and
a surface alignment structure on ~~the~~ an inner surface of at least said first cell ~~wall~~ wall, providing
a single desired uniform alignment to a liquid crystal director,
wherein said alignment is selected from the group consisting of planar, tilted and ~~homeotropic~~;
homeotropic,
wherein said surface alignment structure comprises a two dimensional array of alignment posts
having a random or pseudorandom spacing therebetween, ~~which~~ and
wherein said alignment posts are formed from a material selected from the group consisting of a
photoresist material and a plastics material, and ~~which~~ are shaped and oriented to produce
the desired alignment.

2. (previously presented) A device as claimed in claim 1, wherein said posts have a height in the range of about 0.5 to 5 μm .

3. (previously presented) A device as claimed in claim 1, wherein said posts have a height in the range of about 1.0 to 1.2 μm .

4. (previously presented) A device as claimed in claim 1, wherein at least part of a side wall of said posts is tilted with respect to the normal to the plane of the first cell wall.

5. (previously presented) A device as claimed in claim 1, wherein each post has a width in the range of about 0.2 to 3 μm .

6. (previously presented) A device as claimed in claim 1, wherein said posts are spaced from about 0.1 to 5 μm apart from each other.

7. (original) A device as claimed in claim 1, wherein the liquid crystal material contains a surfactant.

8. (canceled)

9. (currently amended) A device as claimed in claim 1,
wherein said two-dimensional array of alignment posts includes a first alignment post and a second alignment post, and
wherein said first and second alignment posts are of at least one of a different height from one another, a different shape from one another, a different tilt from one another and a different orientation from one another in different regions of the device.

10. (canceled)

11. (currently amended) A cell wall for use in manufacturing a liquid crystal device, comprising:
a wall structure having a surface alignment structure on a surface thereof, for providing a single
desired uniform alignment to a liquid crystal director,
wherein said alignment is selected from the group consisting of planar, tilted and homeotropic,
wherein said surface alignment structure comprises a two dimensional array of alignment posts
having a random or pseudorandom spacing therebetween, which and
wherein said alignment posts are formed from a material selected from the group consisting of a
photoresist material and a plastics material, and ~~which~~ are shaped and oriented to produce
the desired alignment.

12 – 27. (canceled)

28. (previously presented) A device as claimed in claim 1, wherein said liquid crystal material is a nematic liquid crystal.

29. (previously presented) A device as claimed in claim 1, further comprising one or more spacer posts, said one or more spacer posts spanning the entire cell.

30 – 33. (canceled)

34. (currently amended) A liquid crystal device comprising:
a first cell wall and a second cell wall enclosing a layer of liquid crystal material;
electrodes for applying an electric field across at least some of said liquid crystal material; and
a surface alignment structure ~~on the~~ an inner surface of at least said first cell wall, providing a
single desired uniform alignment to a liquid crystal director,
wherein said alignment is selected from the group consisting of planar, tilted and ~~homeotropic~~;
homeotropic,
wherein said surface alignment structure comprises a two dimensional array of alignment posts
having a random or pseudorandom spacing therebetween, which and
wherein said alignment posts are shaped and oriented to produce the desired alignment, and
~~which~~ have a height in ~~the~~ a range of about 0.5 to 5 μm .

35. (previously presented) A device as claimed in claim 34, wherein said posts have a height in the range of about 1.0 to 1.2 μm .

36. (previously presented) A device as claimed in claim 34, wherein at least part of a side wall of said posts is tilted with respect to the normal to the plane of the first cell wall.

37. (previously presented) A device as claimed in claim 34, wherein each post has a width in the range of about 0.2 to 3 μm .

38. (previously presented) A device as claimed in claim 34, wherein said posts are spaced from about 0.1 to 5 μm apart from each other.

39. (previously presented) A device as claimed in claim 34, wherein said posts are formed from a photoresist or a plastics material.

40. (previously presented) A device as claimed in claim 34, wherein the liquid crystal material contains a surfactant.

41. (currently amended) A device as claimed in claim 34,
wherein said two-dimensional array of alignment posts includes a first alignment post and a
second alignment post, and
wherein said first and second alignment posts are of at least one of a different height from one
another, a different shape from one another, a different tilt from one another and a different
orientation from one another in different regions of the device.

42 – 45. (canceled)

46. (previously presented) A device as claimed in claim 34, wherein said liquid crystal material is a nematic liquid crystal.

47. (previously presented) A device as claimed in claim 34, further comprising one or more spacer posts, said one or more spacer posts spanning the entire cell.

48. (canceled)

49. (previously presented) A device as claimed in claim 1, wherein said posts are not treated with or formed from a material which will induce local homeotropic alignment in the liquid crystal material.

50. (new) The liquid crystal device of claim 1, wherein said alignment posts are produced by casting.

51. (new) The liquid crystal device of claim 1, wherein said alignment posts are produced by a technique selected from the group consisting of embossing and injection moulding.

52. (new) The liquid crystal device of claim 1, wherein said two-dimensional array of alignment posts includes a first alignment post that when viewed from above, has a cross-sectional shape selected from the group consisting of a triangle, a square, a circle, an oval, an ellipse and a polygon.

53. (new) The liquid crystal device of claim 1, wherein said two-dimensional array of alignment posts includes a first alignment post that is pyramid-shaped.

54. (new) The liquid crystal device of claim 1, wherein said two-dimensional array of alignment posts includes a first alignment post that has an irregular surface.

55. (new) The liquid crystal device of claim 1, wherein said two-dimensional array of alignment posts includes a first alignment post that has a curved length-wise face.

56. (new) The liquid crystal device of claim 1, wherein said two-dimensional array of alignment posts includes a first alignment post that has less than two planes of reflection symmetry that are normal to said surface of said first cell wall.

57. (new) The cell wall of claim 11, wherein said alignment posts are produced by casting.

58. (new) The cell wall of claim 11, wherein said alignment posts are produced by a technique selected from the group consisting of embossing and injection moulding.

59. (new) The cell wall of claim 11, wherein said two-dimensional array of alignment posts includes a first alignment post that when viewed from above, has a cross-sectional shape selected from the group consisting of a triangle, a square, a circle, an oval, an ellipse and a polygon.

60. (new) The cell wall of claim 11, wherein said two-dimensional array of alignment posts includes a first alignment post that is pyramid-shaped.

61. (new) The cell wall of claim 11, wherein said two-dimensional array of alignment posts includes a first alignment post that has an irregular surface.

62. (new) The cell wall of claim 11, wherein said two-dimensional array of alignment posts includes a first alignment post that has a curved length-wise face.

63. (new) The cell wall of claim 11, wherein said two-dimensional array of alignment posts includes a first alignment post that has less than two planes of reflection symmetry that are normal to said surface of said first cell wall.

64. (new) The cell wall of claim 11,
wherein said two-dimensional array of alignment posts includes a first alignment post and a
second alignment post, and
wherein said first and second alignment posts at least one of a different height from one another,
a different shape from one another, a different tilt from one another and a different
orientation from one another.

65. (new) The liquid crystal device of claim 34, wherein said alignment posts are produced by casting.

66. (new) The liquid crystal device of claim 34, wherein said alignment posts are produced by a technique selected from the group consisting of embossing and injection moulding.

67. (new) The liquid crystal device of claim 34, wherein said two-dimensional array of alignment posts includes a first alignment post that when viewed from above, has a cross-sectional shape selected from the group consisting of a triangle, a square, a circle, an oval, an ellipse and a polygon.

68. (new) The liquid crystal device of claim 34, wherein said two-dimensional array of alignment posts includes a first alignment post that is pyramid-shaped.

69. (new) The liquid crystal device of claim 34, wherein said two-dimensional array of alignment posts includes a first alignment post that has an irregular surface.

70. (new) The liquid crystal device of claim 34, wherein said two-dimensional array of alignment posts includes a first alignment post that has a curved length-wise face.

71. (new) The liquid crystal device of claim 34, wherein said two-dimensional array of alignment posts includes a first alignment post that has less than two planes of reflection symmetry that are normal to said surface of said first cell wall.